

REMARKS

Status of Claims

Claims 1-9 and 11-20 are pending in the application. Claims 1-9 and 11-20 stand rejected.

Claim Rejections

Rejection Under 35 U.S.C. §103(a)

The Examiner has rejected claims 1-9 and 11-20 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 4,185,163 issued to Helmet Schedele (hereinafter referred to as “Schedele”) in view of U.S. Patent 6,337,614 issued to Kazuhiro Tsutsui (hereinafter referred to as “Tsutsui”) and in further view of U.S. Patent 6,252,479 issued to Kern et al. (hereinafter referred to as “Kern”).

The Applicants respectfully disagree with the Examiner’s finding that the Schedele - Tsutsui - Kern combination renders claims 1-9 and 11-20 obvious, because the Schedele - Tsutsui - Kern combination does not teach or suggest each and every element of independent claims 1, 11 and 19. More specifically, the Examiner has repeatedly failed to resolve the level of ordinary skill in the art pursuant to the required Graham v. Deer factors. Instead, with respect to claim 1, for example, the Examiner simply arrives at the unsubstantiated conclusion that in view of Tsutsui “it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the contact carrier of Schedele with side portions to hold the contact carrier in coil pockets as shown by Tsutsui in order to secure the contact carrier and fixed contacts inside the relay.” The Applicants submit, as explained herein, that the Examiner has failed to establish *prima facie* obviousness rejections and that claims 1-9 and 11-20 are patentable as

currently written.

As to the references, Schedele generally teaches a housing assembly for an electromagnetic relay including a coil 24, a multi-component yoke 25, contact springs 28, an intermediate actuating element 27, an armature 26 actuating contact springs 28 through element 27, and a central contact 29 - a fixed contact carrier with a fixed contact secured on the magnet system by insulating block 31 (see Figs. 5 and 6, col. 4, lines 55-65). Tsutsui generally discloses a magnet system for a relay (see Fig. 3) wherein a coil terminal 60 - a contact carrier has corner portions 66 and 67 that extend from contact carrier 60 and hold the contact carrier in coil pockets 16 and 47 via a insertion direction parallel to the surface of the fixed contacts. Kern generally discloses a relay comprising a first half-shells 1 formed by extrusion-coating of a coil 3 having a U-shaped core 6 and a second half-shell 2 formed by extrusion-coating of a spring support 21 and mating contacts 22 and 23, wherein a contact spring 4 with a flat armature 5 is attached to the spring support 21 and the relay is sealed by joining the two half-shells (see Figs. 1 and 9).

With respect to independent claims 1, 11 and 19, the Examiner asserts that Schedele discloses a magnet system for a relay and then correctly notes that Schedele fails to teach exactly how the fixed contact carrier is secured to the insulating blocks. It should be noted here the base reference lacks a great majority of what is required by independent claims 1, 11 and 19. The Examiner proceeds to rely on Tsutsui for a teaching those lacking elements. However, there is simply no motivation to combine the references of Schedele and Tsutsui since such a combination would not result in the contact carrier being fixed in Schedele as simply as what Schedele disclosed. Moreover, as Figures 3 and 4 show, Tsutsui teaches corner portions 66 and 67 of fixed terminal 60 are concurrently inserted into recesses 16 and 47, while projections 71

and 72 are press-fit into recesses 11 and 41, respectively. As a result, fixed terminal 60 is stably mounted with both corner portions 66 and 67 and projections 71 and 72 (col. 7, lines 14-17 and 41-59), that is, corner portions 66 and 67 cannot secure fixed terminal 60 in the position without press-fitted projections 71 and 72 . Furthermore, the Examiner has not resolved the level of ordinary skill in the art as required by the Graham v. Deer factors to support the conclusion that the reasonably skilled artisan would make the three way combination. According to MPEP 2141.03 Factors that may be considered in determining the level of ordinary skill in the art may include: (A) "type of problems encountered in the art;" (B) "prior art solutions to those problems;" (C) "rapidity with which innovations are made;" (D) "sophistication of the technology; and" (E) "educational level of active workers in the field. In a given case, every factor may not be present, and one or more factors may predominate." Here the Examiner has not established the type of problem encountered in the art, namely achieving an adjusted desired overtravel in a relay through the forced fit of a magnet system in a injection mold without additional measures with relatively low production costs; has not cited that any of these references present prior art solutions to those problems; has not referred to the rapidity with which innovations are made; nor sophistication of the technology; nor the educational level of active workers in the field. The record is lacking any discussion wherein the Examiner has even attempted resolved the level of ordinary skill in the art according to these factors. The Applicants therefore maintain that the Examiner has not made a *prima facie* showing that the three references are combinable to render these claims obvious.

More specifically, one of reasonable skill would have no motivation to change a central contact 29 in Schedele by the teaching of Tsutsui with side portions to hold the contact carrier in

coil pockets in order to secure the contact carrier and fixed contacts inside the relay because no side portions of the contact carrier are required, as the claimed invention requires in the independent claims 1, 11 and 19, to achieve contact carrier being secured by insulating blocking 31 on Schedele's magnetic system. For the type of problem encountered in the art, Schedele cannot be combined with the teaching of Tsutsui to arrive at a fixed contact carrier having side portions that hold the fixed contact carrier in pockets of the coil, which is arranged closer to the core in a lower plane to optimize installation space.

Furthermore, the elements in combination do not merely perform the function that each element performs separately. Here the Examiner asserts that Schedele discloses a fixed contact carrier 29 with a fixed contact 29, then correctly notes that Schedele fails to teach exactly how the fixed contact carrier is secured to the insulating blocks. Next the Examiner relies on Tsutsui for teaching the method of the fixed contact carrier being secured to the insulating blocks. That method, when combined with Schedele, will not work correctly, because fixed contact carrier 29 in Schedele is held and secured in insulating support 31 with current structure having no side portions, and fixed terminal 60 in Tsutsui is held by corner portions 66 and 67 and stably mounted with projections 71 and 72 together. In addition, there are significant differences between the claimed invention and the relay described by Kern. Although both the claimed invention and the Kern reference deal with an arrangement of a magnet system with an extrusion coating for an electromagnetic relay and a method for producing the same, the details of producing them are different. Kern teaches a relay with a flat design having two housing parts 1, 2 joined together at their edges to form a seal, and two half-shells 1, 2 formed by extrusion-coating of a coil 3 and a spring support 21 as well as mating contact elements 22 and 23,

respectively, while contact spring 4 and armature 5 are sealed in the housing and the connections for the coil winding and for the contact elements are each passed out through the walls of their respective housing parts, rather than one single piece of extrusion coating in the injection mold completed with the magnet system, the basic body and the fixed contact carrier, and a very accurate, injection mold-determined sized fixed contact assembly so as to obtain the desired fit between the magnet system and the contact carrier and the desired overtravel adjusted without additional measures.

The results of such a combination are therefore not predictable and not one that the ordinarily skilled artisan would make.

For the reasons presented herein, Applicants believe that the rejections of claims 1, 11 and 19 and those that depend there from, namely 2-9, 12-18 and 20 are clearly erroneous. Reversal of the rejections and allowance of the subject application is respectfully requested.

Conclusion

For all of the foregoing reasons and in view of the foregoing amendments, the Applicants respectfully contend that the application is now in condition for allowance. Accordingly, the Applicants respectfully request entry of the foregoing amendments, reconsideration and allowance of claims 1-9 and 11-20 and issuance of a Patent for the subject invention. If the Examiner cares to discuss anything presented here to further prosecution of this application, he is invited to contact the undersigned Attorney for the Applicants. Please charge any additional requisite fees relating to this amendment and response to Deposit Account No. 501581.

Respectfully submitted,

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Dated: June 16, 2010
PTO Customer No.: 29450

Salvatore Anastasi
Attorney for the Applicants
Registration No. 39,090
Telephone No.: 610.722.3899
Facsimile No.: 610.889.3696